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Dr. W. Hayes,
Department of Bacteriology.

24th. August, 1956.

Dear Josh,

Thanks for your last letter. I had a very pleasant talk with Alan Richter at C.S.H. in June where he was kind enough to tell me some of his and your findings in connection with an Hfr strain which segregated F+. I think we might have anticipated this on the Wollman/Jacob theory. However, he reported me incorrectly as regards HfrH. If I gave the impression that this was stable, what I meant was that I have never had any trouble with my stocks with regard to reversion to F+. However, I find it easy to obtain an F+ reversion of HfrH by serial sub-culture in broth. Although I have had HfrC for some time, I have not yet done any work with it. I do not have any M-S^s HfrH but only the S^s B_1- strain. I think you have my original strain but in case anything has happened to it I will send you another culture of this as well as the S^sB_1-.

I got a reprint of the lambda transduction paper from Morse - many thanks to you both. I quite understand about your reprint problems. I just wanted to be sure that I was on your mailing-list.

With regard to the "F- which is genetically Hfr" which you did not understand from my last letter: we have found that if we make either M-F+ or M-HfrH Furacin resistant they are no longer fertile with F- strains but can act as recipients with TLB_1-F+ or Hfr. However, in this latter cross they behave like normal HfrH, and their aerated overnight cultures give a much higher recombination rate than young cultures, while the optimal rate is much lower than with control F+ i.e. the strains behave as if they were genotypically donors although they cannot donate. This change is associated with a change in colonial appearance and I think it is due to a failure to conjugate with F- although conjugation with F+ or Hfr is still possible i.e. that the failure of recombination is due to a change in cell surface only. We are now trying to carry out experiments to prove genetically that these infertile strains are still genotypically donors.

(which is made to act as a recipient by mating S^sHfr with S^sF+ (or Hfr) on MA+S.

I am sorry that the Ciba Symposium does not fit in with your Australian plans as we hoped it might. However, we are still hoping that both you and Esther will be able to make the trip.

With Best Wishes,

Yours,

Bill

Dr. W. Hayes.

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